

# Sub 200 Temperature Sensor



## Low Temperature Sensor

The KoolZone Sub200 sensor is a LoRaWAN sensor suitable for very low temperature operation down to  $-200^{\circ}\text{C}$ . It is based on a platinum resistance probe which provides greater accuracy and long term stability than other technologies. The sensor is offered with a range of calibration options to suit different applications.

Typical applications are liquid nitrogen monitoring in biotech and medical applications or any other systems that needs to operate at temperatures below  $-100^{\circ}\text{C}$  and above  $-200^{\circ}\text{C}$ .

## Accuracy

The sensor employs the latest in platinum resistance probes manufactured and compliant to BS EN 60751 so that the indicated temperature is accurate to within  $\pm 1^{\circ}\text{C}$ .

## Calibration

Different levels of calibration are available, the manufacturers' calibration certification, UKAS calibration, and reference calibration at specific temperature points carried out by KoolZone.



**Temperature Monitor**



**Accuracy  $\pm 1^{\circ}\text{C}$**



**3 - 7 Years Battery Life**



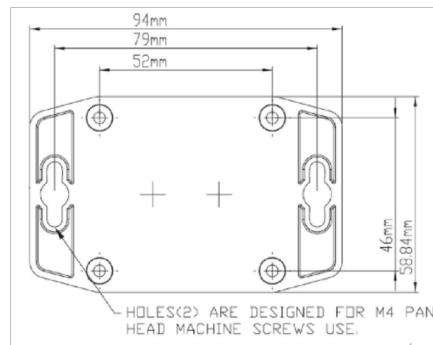
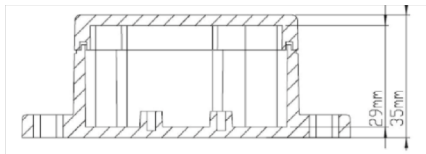
**Wireless Connection**



**Out-of-the-Box**

## Technical Specification

Operating Temperature	Sensor electronics between -30°C to +50°C
Measurement Range	Sensor probe: -200°C to +50°C
Accuracy	± 1°C between -30°C and -200°C
Measurement Resolution	0.4°C at -80°C
IP Rating	IP65
Probe Dimensions	65mm x 6mm diameter stainless steel tube
Cable Length	2m cable (other lengths available)
Probe Reaction Time	2mins 45 seconds (63% of delta)
Battery Type	Lithium thionyl chloride
Battery Life	3 to 7 years depending on sampling period
Radio Signal	LoRaWAN 1.0.2, certified for use in UK, Europe, USA and other countries (please enquire)
Wireless Distance	Free space range tested to 20Km



## Note

Monitored data and alarms are visible through KoolZone's sophisticated monitoring platform running on iOS or Android phone, iPad, tablet or laptop. Alert notifications can be sent by text, email, or phone.

This sensor probe is not suitable for direct long-term immersion in liquids or corrosive environments. An alternative KoolZone sensor probe is available for liquid immersion, including dishwashers.

### Contact Details:

**UK OFFICE**  
**KoolZone Limited**  
 The Hub, 14 Station Road,  
 Henley-on-Thames, Oxfordshire, RG9 1AY, UK

**GERMAN OFFICE**  
**KoolZone Tracking Systems GmbH**  
 Rotkamp 37,  
 13053 Berlin, Germany